Amendments to the Claims:

This listing of the claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1 (**Previously Presented**). A method for estimating the time-dispersion of a channel in a communications system, the channel comprising D subchannels, comprising:

computing, from a signal received over the channel in a receiver, a set of estimated Channel Transfer Factors (CTF's) $\hat{H}[\upsilon]$, where υ ($0 \leq \upsilon < D$) is the subchannel number,

calculating, for a predetermined strictly positive integer d, a correlation factor C_d representing the correlations, both in amplitude and in phase, between pairs $\hat{H}[\upsilon]$ and $\hat{H}[\upsilon + d]$ of said computed CTF estimates, and

estimating, in said receiver, the time-dispersion of said channel using the calculated correlation factor C_d.

2 (**Previously Presented**). A time-dispersion estimation method according to Claim 1, wherein a normalized expression for said correlation factor C_d is:

$$C_d \equiv \frac{2 \cdot \left| \sum_{\upsilon} \hat{H}^*[\upsilon]\, \hat{H}[\upsilon + d] \right|}{\sum_{\upsilon} \left(\left| \hat{H}[\upsilon] \right|^2 + \left| \hat{H}[\upsilon + d] \right|^2 \right)} \quad ,$$

where the sums over υ are carried over available pairs of said computed CTF estimates.

3 **(Previously Presented).** A time-dispersion estimation method according to Claim 1, wherein a normalized expression for said correlation factor C_d is:

$$C_d \equiv \left(1+\frac{1}{\zeta_u}\right)\frac{2\cdot\left|\sum_v \hat{H}^*[v]\,\hat{H}[v+d]\right|}{\sum_v\left(\left|\hat{H}[v]\right|^2+\left|\hat{H}[v+d]\right|^2\right)}\ ,$$

where ζ_u is the mean channel estimation signal-to-noise ratio, and the sums over v are carried over available pairs of said computed CTF estimates.

4 **(Previously Presented).** A time-dispersion estimation method according to claim 1, further comprising a step of looking-up in a pre-constructed mapping table a value of channel excess delay τ corresponding to the value of said correlation factor C_d.

5 **(Previously Presented).** A time-dispersion estimation method according to claim 1, further comprising a step of adapting some link parameters as a function of the value of said correlation factor C_d.

6 **(Currently Amended).** A device (100) for executing ~~the method of claim 1~~a method for estimating the time-dispersion of a channel in a communications system, the channel comprising D subchannels, the method comprising computing, from a signal received over the channel in a receiver, a set of estimated Channel Transfer Factors (CTF's) $\hat{H}[v]$, where v $(0 \le v < D)$ is the subchannel number, calculating, for a predetermined strictly positive integer d, a correlation factor C_d representing the correlations, both in amplitude and in phase, between pairs $\hat{H}[v]$ and

<u>$\hat{H}[\upsilon + d]$ of said computed CTF estimates, and estimating, in said receiver, the time-</u>
<u>dispersion of said channel using the calculated correlation factor C_d,</u> said device
comprising:

an input configured to receive the set of estimated Channel Transfer
Factors (CTF's) $\hat{H}[\upsilon]$, where υ ($0 \leq \upsilon < D$) is the subchannel number, computed from
the received signal, and

a correlations unit (102) configured to compute the correlation factor C_d,
where d is a predetermined strictly positive integer.

7 **(Previously Presented).** A time-dispersion estimation device according
to Claim 6, further comprising a parallel-to-serial unit (101) capable, when provided with
a CTF vector $\hat{\mathbf{H}}$ as an input, of providing said correlations unit (102) with a series of
individual CTF's $\hat{H}[\upsilon]$ classified by successive subchannel number υ.

8 **(Previously Presented).** A time-dispersion estimation device according
to Claim 6, wherein a normalized expression for said correlation factor C_d is:

$$C_d \equiv \frac{2 \cdot \left| \sum_{\upsilon} \hat{H}^*[\upsilon] \, \hat{H}[\upsilon + d] \right|}{\sum_{\upsilon} \left(\left| \hat{H}[\upsilon] \right|^2 + \left| \hat{H}[\upsilon + d] \right|^2 \right)} \quad ,$$

where the sums over υ are carried over available pairs of said computed CTF estimates.

9 **(Previously Presented).** A time-dispersion estimation device according to
Claim 6, wherein a normalized expression for said correlation factor C_d is:

$$C_d \equiv \left(1 + \frac{1}{\zeta_u}\right) \frac{2 \cdot \left|\sum_{\upsilon} \hat{H}^*[\upsilon]\, \hat{H}[\upsilon+d]\right|}{\sum_{\upsilon}\left(\left|\hat{H}[\upsilon]\right|^2 + \left|\hat{H}[\upsilon+d]\right|^2\right)} \quad ,$$

where ζ_u is the mean channel estimation signal-to-noise ratio, and the sums over υ are carried over available pairs of said computed CTF estimates.

10 **(Previously Presented).** A time-dispersion estimation device according to claim 6, further comprising a look-up table (103), capable of providing a value of channel excess delay τ corresponding to the value of C_d.

11 **(Previously Presented).** A time-dispersion estimation device according to claim 6, further comprising a link adapter responsive to the value of said correlation factor C_d.

12 **(Previously Presented).** A modulated-signal reception apparatus, comprising a device according to claim 6.

13 **(Previously Presented).** A telecommunications network, comprising at least one reception apparatus according to Claim 12.

14 **(Previously Presented).** A data storage device, comprising a computer readable storage medium storing computer program code instructions for executing steps of the method according to claim 1.

15 **(Previously Presented).** A data storage means according to Claim 14, wherein the data storage device is partially or totally removable.

16 **(Previously Presented).** A computer program stored on a computer readable storage medium, comprising computer program code instructions such that,

when said program is executed to control a programmable data processing device, said

instructions cause said data processing device to implement a method according to

claim 1.

17 **(Previously Presented)**. A time-dispersion estimation device

according to claim 7, wherein a normalized expression for said correlation for factor C_d.

$$C_d \equiv \frac{2 \cdot \left| \sum_{\upsilon} \hat{H}^*[\upsilon] \, \hat{H}[\upsilon+d] \right|}{\sum_{\upsilon} \left(\left| \hat{H}[\upsilon] \right|^2 + \left| \hat{H}[\upsilon+d] \right|^2 \right)} \quad ,$$

where the sums over υ are carried over available pairs of said computed CTF estimates.

18 **(Previously Presented)**. A time-dispersion estimation device

according to claim 7, wherein a normalized expression for said correlation for factor C_d

is:

$$C_d \equiv \frac{2 \cdot \left| \sum_{\upsilon} \hat{H}^*[\upsilon] \, \hat{H}[\upsilon+d] \right|}{\sum_{\upsilon} \left(\left| \hat{H}[\upsilon] \right|^2 + \left| \hat{H}[\upsilon+d] \right|^2 \right)} \quad ,$$

where ζ_u is the mean channel estimation signal-to-noise ratio, and the sums over υ are

carried over available pairs of said computed CTF estimates.

19 **(Previously Presented)**. A time-dispersion estimation device

according to claim 7, further comprising a look-up table (103), capable of providing a

value of channel excess delay τ corresponding to the value of C_d.

20 **(Previously Presented).** A time-dispersion estimation device according to claim 7, further comprising a link adapter responsive to the value of said correlation factor C_d.